

GUIDELINES FOR MARKETING DEMAND-SIDE MANAGEMENT IN THE COMMERCIAL SECTOR
 STEVEN S. GEORGE, Ph.D.
 Vice President
 XENERGY, Inc.
 Oakland, California

ABSTRACT

For the past decade, electric and gas utilities throughout the nation, not just in hot and humid climates, have promoted energy efficiency through a variety of demand-side management (DSM) programs. In 1984, the Electric Power Research Institute (EPRI) began a study of the DSM activity of utilities in order to assess the effectiveness of such programs for meeting a variety of objectives. One element of this broad based study was an investigation into the factors that influence commercial customer acceptance of demand-side management. This paper summarized the results of this research. A more detailed accounting of the research can be found in DSM Commercial Customer Acceptance, Volume 1: Program Planning Insights, EPRI EM-5633, January 1988.

KEY FACTORS INFLUENCING DSM PROGRAM PARTICIPATION

Utilities use an extremely diverse set of program options and features to influence energy consumption and demand among commercial customers. Through a review of these programs and associated research, we have identified five primary factors that significantly influence customer interest in DSM technologies and participation in DSM programs. These are

1. customer needs
2. customer characteristics
3. effective communication
4. internal utility promotion and program management, and
5. external influences.

Each of these factors will now be discussed.

UNDERSTANDING AND MEETING CUSTOMER NEEDS

The most important factor influencing DSM program participation is understanding and meeting customer needs. As indicated in Figure 1, the important customer needs that pertain to energy related decisions include

1. Economics. What is the economic benefit to be derived from participation in a utility program or implementing a DSM-measure--its payback, net present value, etc?
2. Financing. How will an energy investment be financed--through borrowing, a foregone investment, alternative current revenues?
3. Risk Management. Is there uncertainty

regarding the outcome of an investment or action?

4. Time Management. How much staff time will it take to investigate and undertake an investment?

5. Comfort. What is the impact of an action on employee and customer comfort?

6. Other. Will an action increase noise, reduce the attractiveness of the building, affect the security of the business, require more space than is available, etc.?

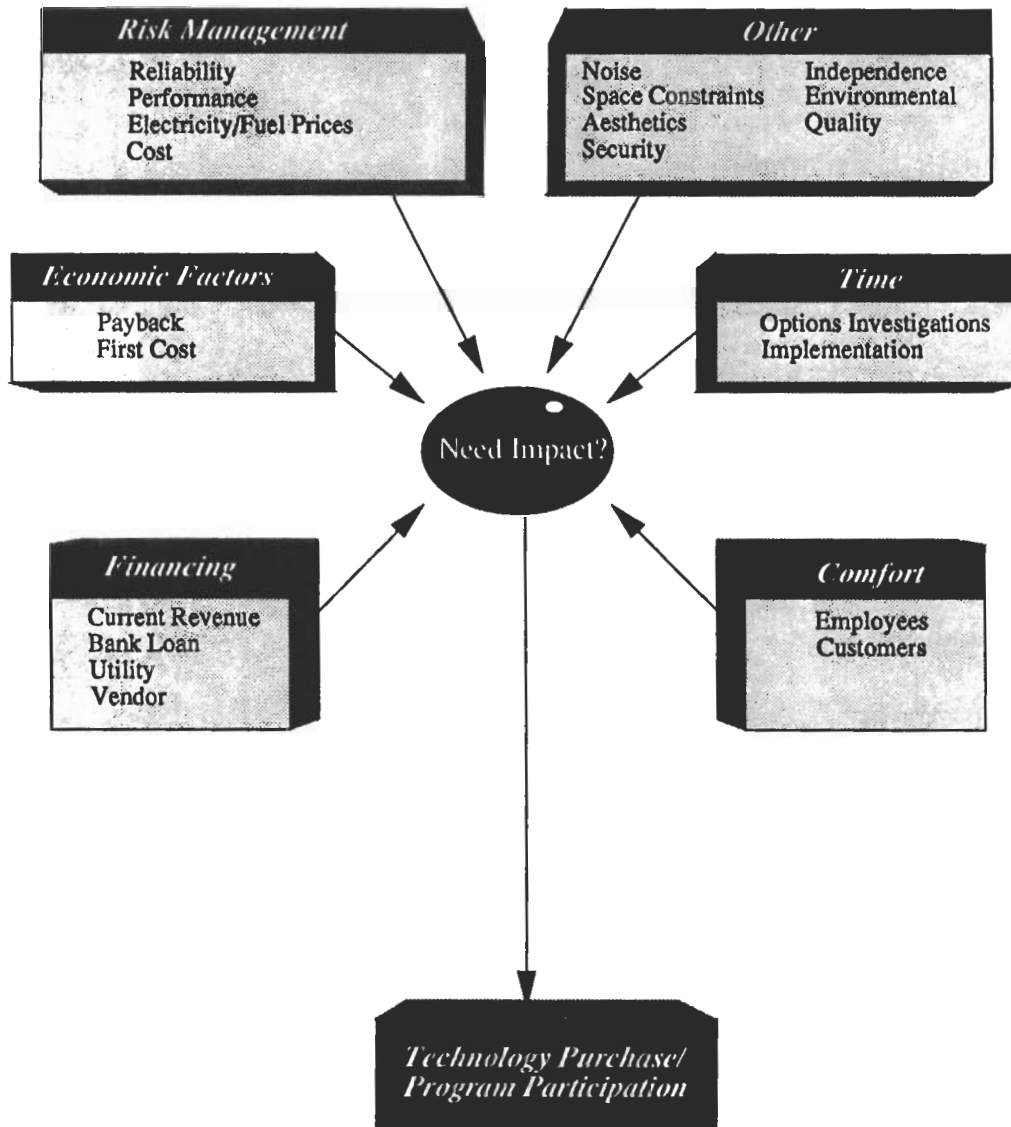
Each of these needs can act either as a barrier to program participation, or as an opportunity to bring about action that would not otherwise have occurred. Effective program design involves understanding these needs and carefully selecting the DSM program options and features that address the most important customer needs, subject to the resource constraints of the program.

Figure 2 contains a mapping of different customer needs with some of the DSM program options and features available to utilities. As seen, most DSM programs specifically address one or more of these needs or must overcome concerns generated from these needs in order to be successful.

For example, subsidy and grant programs focus on the economic needs of customers, while loan programs and third party financing address financial needs. Guaranteed performance programs directly address the risk aversion of customers, while direct assistance programs attempt to minimize the time required by customers to implement DSM measures. Direct load control programs must overcome the concern of customers about the comfort of their environment, while the success of certain conservation programs (e.g., delamping) must contend with concerns over attractiveness and security.

Most of the DSM programs implemented to date by utilities have focused primarily, and often exclusively, on the economic and financial needs of customers through the provision of subsidies, rate incentives, and low or no interest loans. Audit programs, the most conservation program used by utilities, similarly focus primarily on the economic needs of customers through the provision of information on how to reduce energy costs.

While economic and financial needs obviously play a critical role, a major conclusion of this study is that utilities can significantly improve the cost-effectiveness and participation rates in DSM programs by addressing other customer concerns as well. Even when economics is the primary motivator, other factors can act as a veto over the decision to participate in a program or make an energy related investment. Meeting a customer's economic criterion for investment is a necessary, but often not a sufficient, condition for action.



Source: XENERGY, Inc. *DSM: Commercial Customer Acceptance, Volume 1, EPRI EM5633, January 1988.*

Fig. 1 Value Attributes Relevant to Utility Service Options

Program Type	Program Features	Customer Needs and Motivations				
		Economic	Financial	Risk Mgmt.	Time Mgmt.	Comfort
Audits	Audits	●		●		○
Non-audit information	Demonstration program			●		
	Seminars/conferences			●		
	Technical information			●		
	Peer testimonial			●		
	Vendor screening/selection				●	
Incentives	Purchase subsidy	●				
	Guaranteed payback	●		●		
	Pay for savings	●		○		
	Equipment giveaway	●			●	
	Engineering design studies				●	
	Direct equipment installation	●			●	
	Shared savings	●	●	●	●	
	Reduced interest loan	●	●			
	Loan provision		●			
	Loan guarantee		●			
	Third party financing	●	●	●		
	Guaranteed performance	●		●		
	Simplified participation requirements				●	
Load Control	Distributed/local control			●		○
	Direct load control			○		○
Thermal energy storage	Thermal energy storage			○		○
TOU rates	TOU rates	●				
Other rates	Rate Guarantee	●		●		
	Interruptible/curtailable rate	●		○		

● = Program type/feature directly addresses need/motivation.
 ● = Program type/feature indirectly addresses need/motivation.
 ○ = Program type/feature in conflict with need/motivation.

Source: XENERGY, Inc. DSM: Commercial Customer Acceptance, Volume 1, EPRI EM5633, January 1988.

Fig. 2 Program Features and Customer Needs

CUSTOMER CHARACTERISTICS

A large number of customer characteristics exhibit some correlation with participation in DSM programs. These include size, business type, organizational structure, business ownership status, energy intensity, magnitude of the energy bill, building age, length of a lease, type of end-use equipment, and complexity of the decision process.

In general, regardless of the precise measure used, size appears to be the single strongest indicator of interest in DSM technologies and utility sponsored programs, especially with respect to conservation alternatives. Small firms are much less likely than large ones to participate in energy conservation programs and/or implement energy conservation measures.

Evidence of the relationship between business type and DSM program participation is mixed. Most of the evidence suggests that retail establishments are a "hard sell" for most DSM programs, while hotel/motel establishments have a high degree of interest. The relative rankings of other business categories is less clear.

For thermal storage programs, information on the ownership and organization structure of firms can be a leading indicator of interest. One study indicated that medium to large, locally owned firms showed the greatest interest in thermal storage when compared with either large internal firms constructing facilities in a local region or small local firms constructing first time facilities.

EFFECTIVE COMMUNICATION

Effective communication, essential to the marketing process, consists of three parts: the means, the message, and the messenger. The "means" refers to the channels of communication; e.g., direct mail, telemarketing, personal contact, or some other method of delivering the message is used. The "message" refers to the particular information that is supplied to the customer in order to inform him or her about the program features. The "messenger" refers to the particular individual or type of individual selected to deliver the message.

With regard to the means of communication, personal contact provides by far the most effective alternative in the commercial sector. Personal contact is often the only way to wade through the many internal channels within a firm in order to identify the appropriate person or persons to communicate with.

The message used to sell a DSM program also contributes critically to success. As discussed previously, commercial customers have a variety of needs and motivations; the sales message should address as wide a range of needs as possible. Many DSM programs focus entirely on one criterion, such as cost savings, when many customers have equally major concerns over comfort or some other factor. Positive messages (e.g., increased comfort at the same cost) are generally more effective than negative messages (e.g., energy reduction). Furthermore, expressing the benefits in terms familiar to a customer can increase marketing effectiveness. Many customers relate better to the message that a DSM action will increase profit, require fewer sales for the same profitability, or

provide increased operating revenue to pay salaries, than to a message about using fewer BTU's.

Finally, who delivers the message (e.g., the messenger) also plays an important role. Commercial customers listen first and foremost to their peers. Using satisfied customers to promote programs can be quite effective.

INTERNAL PROMOTION AND PROGRAM MANAGEMENT

The factors discussed up to now--understanding and meeting customer needs, customer characteristics, effective communication--have focused almost entirely on the customer as the key to successful programs. However, success also depends upon many internal utility matters, including effective program management and motivated employees. Among the important planning guidelines in this area are

1. Employee incentives, ranging from recognition of a job well done to monetary rewards, are increasingly being used to successfully motivate employees and increase sales.
2. Foster the involvement of field personnel in program design.
3. Set goals for success--managers get what they ask for. What you don't set as a goal won't be achieved.
4. Respect professional judgment of field personnel--use guidelines, not strict rules.
5. Require sales training.
6. Support old programs as new ones are introduced--placing complete support to the new, "sexy" program can destroy morale.
7. Encourage networking--have field representatives get together on occasion to compare notes and exchange war stories.
8. Recognize accomplishments.
9. Create a positive vision--present the big picture. What strategic objectives and utility goals are being addressed by the program?

EXTERNAL FACTORS

External factors affecting DSM program participation include climate, prices of competing fuels, and economic conditions in the service territory. Customers in severe climates such as hot and humid climates, will have a greater awareness of energy issues and a greater need to control energy costs. Fuel prices that exceed electricity prices (on a unit of service basis) will positively affect programs designed to promote electricity sales. On the other hand, if electricity prices are high, promotional programs will meet with less success, while conservation programs will receive greater interest.

GUIDELINES FOR PROGRAM PLANNING

An understanding of the key factors that influence DSM program participation provides the basis for development of the following guidelines for planning future programs.

AUDIT PROGRAMS

1. Be sensitive to customer needs and motivations. Don't assume that the only reason the customer is interested in an audit is to save money. What the customer may really want to know is how to eliminate the draft.

2. Specialization can increase knowledge and understanding. By allowing auditors to specialize with respect to certain types of customers (e.g., restaurants, retail stores) rather than do audits for many different types, they can improve their understanding of how customers think about energy matters and therefore become better at selling DSM actions.

3. Energy analysis is the beginning of the sales process, not the end.

4. Sales training for auditors is essential. While most engineers are well trained for counting Btu's, many are poorly trained in communicating the value of their analysis to customers.

5. Present recommendations in terms that the customer understands. Presenting savings information in terms of avoided capital outlays, reduced need for sales to achieve the same profitability, or increased resources for other purposes, can be much more effective than a list of payback periods or a simple dollar figure.

6. Whenever possible, present the audit results in person. This allows the customer to solicit additional information that will help him or her make a more informed decision, allows the auditor to learn more about what the customer needs, and to sell the customer on taking action.

7. Sales incentives can be an effective motivator for field personnel. Motivating personnel through effective management, recognition, and financial rewards can have a significant impact on productivity and increase customer participation in DSM programs.

8. Select the appropriate communication channel. Direct mail, telemarketing, in-person contact, and trade-allies are the most effective communication channels in the commercial sector.

NON-AUDIT INFORMATION PROGRAMS

1. Provide documented evidence on local applications. When investigating specific DSM technologies, customers are most interested in documentation on system performance in local applications similar to what theirs would be like.

2. Peer testimonials are effective. If something has worked well, recruit individuals that will testify to this fact.

3. Be sensitive to customer needs and motivations. This is as relevant for non-audit information programs as for audits and other programs.

4. Present information in terms that the customer understands. Provide examples of how different businesses might relate the dollar savings associated with an investment to their primary business activities, objectives, and opportunities.

INCENTIVE PROGRAMS

1. Address risk directly when possible. Risk may be addressed more effectively and at lower cost

through programs that guarantee the payback on an investment and/or the performance of the equipment, than through large up-front subsidies.

2. Consider rate guarantees as an alternative to subsidies where regulatory commissions will allow such consideration. Part of a customer's uncertainty regarding payback is associated with concerns over future electricity and fuel prices. Guaranteeing the rate level or structure, at least during the forecasted payback period, may eliminate the need for an up front subsidy.

3. Most customers don't need loans. Access to capital is not a primary barrier to DSM investments for most commercial customers.

4. Shaved savings programs generate immediate benefits. Financing an investment through shared savings creates an immediate positive cash flow.

5. Direct assistance gets results. Direct installation of DSM measures by utility personnel or contractors can overcome the time management barrier associated with many customers.

6. Keep the paperwork simple.

7. Be flexible.

8. Promote different DSM technologies through different channels. Some technologies are better promoted at the point of purchase than directly to the customer.

LOAD CONTROL PROGRAMS

1. Concerns about employee and customer comfort must be addressed. Peer testimonials, documentation on customer satisfaction, and other forms of evidence should be presented to prospective participants in order to overcome this critical barrier to success.

2. Demonstration and pilot programs may be necessary. If local customer satisfaction data are not available, demonstration and pilot programs may be required to develop the necessary documentation to overcome the concern for comfort.

3. Personal contact marketing is important. This may be the only way to adequately address the concerns of customers regarding the comfort of their employees and customers.

THERMAL ENERGY STORAGE PROGRAMS

1. Timing is critical. A key to the promotion of TES is making sure that it is considered early in the design process. This will avoid any redesign work that might be required to make room for certain types of systems.

2. Sales training is essential. Marketing personnel should be selected that have both a technical and sales background.

3. Management flexibility is important. Key decisions are often reached quickly in the design phase of a building. If approval of a utility incentive takes six signatures and three weeks time, opportunities can be lost.

4. Payback, rate and performance guarantees may be an effective alternative to up-front subsidies in overcoming the uncertainty and perceived risk associated with new technologies such as TES.

5. Local performance data are important.

RATE PROGRAMS

1. TOU rate programs do not sell themselves. Most commercial customers do not perceive an ability to shift load, and such programs will need to be actively promoted if high participation levels are to be achieved.

2. Use other DSM programs to sell rates. Customers interested in TES equipment will be similarly interested in TOU rates, and vice versa. Quite often, one program can help sell another.

3. Offer a variety of rate options. The commercial class is extremely heterogeneous and a single rate is unlikely to appeal to a large cross-section of customers. A menu approach to interruptible rates and other rate options is becoming increasingly popular.

4. Provide technical assistance if required. TOU and interruptible rates are new to many customers who historically have not been motivated to think of ways to alter their demand. Utility assistance in devising load shifting strategies may be required to capture potential program participants.